

# INTERNATIONAL SEARCH REPORT

International Application No  
PCT/GB2005/000768

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C07D487/04 C07D519/00 A61K31/5517 A61P35/00

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C07D A61K A61P

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, BEILSTEIN Data, CHEM ABS Data, PAJ

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	CHEN ET AL: "A novel approach to the synthesis of cytotoxic C2?C3 unsaturated pyrrolo'2,1-c!' and !benzodiazepines (PBDs) with conjugated acrylyl C2-substituents" BIOORGANIC & MEDICINAL CHEMISTRY LETTERS, vol. 14, no. 6, 27 February 2004 (2004-02-27), pages 1547-1549, XP002329273 page 1548; figure 1	1-35
X	KANG ET AL: "Synthesis of a novel C2-aryl substituted 1,2-unsaturated pyrrolobenzodiazepine" CHEMICAL COMMUNICATIONS, vol. 14, 11 June 2003 (2003-06-11), pages 1688-1689, XP002329274 page 1688	11-24

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Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

\* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search

24 May 2005

Date of mailing of the international search report

20/07/2005

Name and mailing address of the ISA

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>GREGSON ET AL: "Synthesis of the first examples of A-C8/C-C2 amide-Linked pyrrolo'2,1-c!'1,4!benzodiazepine dimers" BIOORGANIC &amp; MEDICINAL CHEMISTRY LETTERS, vol. 13, no. 14, 31 March 2003 (2003-03-31), pages 2277-2280, XP002329063 scheme 3 page 2279</p>	11-24
X	<p>COOPER ET AL: "Synthesis of novel C2-aryl pyrrolobenzodiazepines (PBDs) as potential antitumour agents" CHEMICAL COMMUNICATIONS, vol. 16, 5 July 2002 (2002-07-05), pages 1764-1765, XP002329275 page 1764</p>	11-24
X	<p>GREGSON ET AL: "Synthesis of the first example of a c2-C3/C2?-C3?-endo unsaturated pyrrolo'2,1-c!'1,4!benzodiazepine dimer" BIOORGANIC &amp; MEDICINAL CHEMISTRY LETTERS, vol. 11, no. 21, 27 August 2001 (2001-08-27), pages 2859-2862, XP002329276 page 2861</p>	11-24
X	<p>GREGSON ET AL: "Effect of C2/C3-endo unsaturation on the cytotoxicity and dna-binding reactivity of pyrrolo'2,1-c!'1,4!benzodiazepines" BIOORGANIC &amp; MEDICINAL CHEMISTRY LETTERS, vol. 10, no. 16, 14 April 2000 (2000-04-14), pages 1849-1852, XP004216014 figure 1, schemes 1-3 page 1850 - page 1851</p>	11-24
X	<p>WO 00/12508 A (THE UNIVERSITY OF PORTSMOUTH HIGHER EDUCATION (GB)) 9 March 2000 (2000-03-09) cited in the application the whole document</p>	11-24
X	<p>FUKUYAMA ET AL: "Total synthesis of (+)-porothramycin B" TETRAHEDRON LETTERS, vol. 34, no. 16, 16 April 1993 (1993-04-16), pages 2577-2580, XP002135999 page 2577 page 2578</p>	11-24
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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P,X	WO 2004/043963 A (SPIROGEN (GB)) 27 May 2004 (2004-05-27) the whole document	11-24
P,X	TIBERGHIE ET AL: "Application of the Stille coupling reaction to the synthesis of C2-substituted endo-exo unsaturated pyrrolo[2,1-c][1,4]benzodiazepines (PBDs)" BIOORGANIC & MEDICINAL CHEMISTRY LETTERS, vol. 14, no. 20, 1 September 2004 (2004-09-01), pages 5041-5044, XP002329277 the whole document	11-24

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### Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.: —  
because they relate to subject matter not required to be searched by this Authority, namely:  
Rule 39.1(iv) PCT – Method for treatment of the human or animal body by therapy
2. ☐ Claims Nos.:  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

### Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this International application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

#### Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

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Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 0012508	A	09-03-2000	AT 240334 T	15-05-2003
			AT 294803 T	15-05-2005
			AU 757510 B2	20-02-2003
			AU 5635199 A	21-03-2000
			CA 2341471 A1	09-03-2000
			DE 69907977 D1	18-06-2003
			DE 69907977 T2	22-07-2004
			DE 69925133 D1	09-06-2005
			DK 1193270 T3	15-09-2003
			EP 1193270 A2	03-04-2002
			EP 1413582 A1	28-04-2004
			EP 1109812 A2	27-06-2001
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			WO 0012508 A2	09-03-2000
			JP 2002525285 T	13-08-2002
			NZ 510493 A	28-11-2003
			PT 1193270 T	31-10-2003
			US 2003120069 A1	26-06-2003
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			WO 2004043963 A1	27-05-2004